

15. (Twice Amended) A semiconductor device comprising:

a first wiring layer composed of a plurality of wiring patterns separate from each other embedded and wired on an upper surface of a first insulating layer which covers a surface of a semiconductor substrate;

a nonconductive layer formed by oxidation of material composing the first wiring layer, wherein the nonconductive layer comes into contact with the first wiring layer and covers the first insulating layer, and a top of the first wiring layer is not higher than a top of the first insulating layer, further wherein thickness of said nonconductive layer being arranged above the wiring layer is thicker than that of being arranged above the insulating layer.

16. (Amended) A semiconductor device, comprising:

a substrate;

a first insulating layer covering a surface of the substrate;

a first wiring layer including a plurality of wiring patterns separate from each other embedded and wired on an upper surface of the first insulating layer, the first wiring layer including a first material; and

a nonconductive layer formed by oxidation of the first material, the nonconductive layer contacting the first wiring layer and covering the first insulating layer,

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wherein a top of the first wiring layer is not higher than a top of the first insulating layer, and a thickness of said nonconductive layer being arranged above the wiring layer is thicker than that of being arranged above the insulating layer.

17. (Amended) A semiconductor device, comprising:

a substrate;

a first insulating layer covering a surface of the substrate;

a first wiring layer including a plurality of wiring patterns separate from each other embedded and wired on an upper surface of the first insulating layer; and

a nonconductive layer contacting the first wiring layer and covering the first insulating layer, the nonconductive layer includes oxygen ions,

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wherein a top of the first wiring layer is not higher than a top of the first insulating layer, and a thickness of said nonconductive layer being arranged above the wiring layer is thicker than that of being arranged above the insulating layer.

18. (Amended) A semiconductor device, comprising:

a substrate;

a first insulating layer covering a surface of the substrate;

a first wiring layer including a plurality of wiring patterns separate from each other and embedded on an upper surface of the first insulating layer; and

a nonconductive layer that includes oxygen ions contacting the first wiring layer and covering the first insulating layer,

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wherein a top of the first wiring layer is not higher than a top of the first
insulating layer, and a thickness of said nonconductive layer being arranged above the
wiring layer is thicker than that of being arranged above the insulating layer.
